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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: Follow-up to 3/30/87 EEB Memorandum -- Sulfosate

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THRU: Harry Craven, Section Head
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THRU: *for* Michael W. Slimak, Chief
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Douglas J. Khan, Acting 4/1/87

TO: Robert J. Taylor
Product Manager, Team 25
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In a meeting of 3-31-87, Robert J. Taylor requested that EEB provide additional explanation for the data requirements cited in the 3-30-87 memorandum on sulfosate. EEB's 1-21-87 review contains the actual hazard assessment for the proposed use of sulfosate on noncropland and presents clear justifications for all data requirements specified. In summary, for remaining requirements:

- 1) Fish embryolarvae and aquatic invertebrate life-cycle studies with sulfosate (40 CFR 158.145) are required because sulfosate can be expected to runoff to aquatic habitat and it is expected to be highly persistent in this environment (see EAB 6-30-86 and 3-27-87 reviews):
 - a) high water solubility
 - b) photolytic persistence -- anion portion half-life up to 77.9 days
-- cation portion half-life 31.7 days to "stable"
 - c) hydrolytic persistence -- hydrolysis "essentially nonexistent at pH 5-9"
 - d) potential for repeat applications
 - e) noncropland such as rights-of-way may either contain or pass near a wide variety of aquatic habitat types.

INERT INGREDIENT INFORMATION IS NOT INCLUDED

These chronic studies are also needed with the SC-0224 4-LC formulation because of the persistence of the [REDACTED] (V. Nabholtz, OTS, estimates several days to several weeks) and the acute toxicity of this formulation (i.e., assuming chronic effect levels are lower than acute effect levels, they would be even more likely to be exceeded under the proposed use).

- 2) Tier I Plant Protection studies (40 CFR 158.150) with SC-0224 4-LC are required since the herbicide can be expected to be toxic to nontarget plants, [REDACTED] may be particularly toxic to algae (V. Nabholtz, OTS), noncropland such as rights-of-way can pass through forest and grassland areas, and a variety of endangered plant species are associated with noncropland (see 40 CFR 158.150 criteria).
- 3) Acute aquatic studies (using bluegill sunfish, rainbow trout, *D. magna*) are required with the SC-0224 4-LC [REDACTED] since this formulation is up to 714X as toxic as technical sulfosate, and such testing would enable the Agency to determine if the toxicity is due largely to the inherent toxicity of [REDACTED] or whether there is a synergistic effect with the technical material. Also, since [REDACTED] is likely to runoff at a different rate than technical material, such testing would enable the Agency to more accurately predict the effect of any exposure to [REDACTED] runoff.

For EEB to properly run aquatic exposure models (SWRRB/EXAMS), the registrant should submit both dissociation constant and K_d values, data not presently available from EAB (R. Lee, personal communication).

As noted in both our 1-21-87 review and 3-30-87 memorandum, endangered species labeling will be required. Specific label language will be forwarded following formal consultation with USFWS (and/or possible assumptions of jeopardy based on existing case-by-case Biological Opinions, with USFWS concurrence). Please note our previous label comments regarding the prohibition of certain uses. The caution "Keep out of lakes, ponds or streams" is also specified by 40 CFR 162.10, in addition to the existing proposed statements. Complete label comments cannot be made until completion of consultation with USFWS and the review of the above data.